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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/528,126	03/17/2000	Noriyoshi Satoh	32439	2947

116 7590 12/04/2003

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CLEVELAND, OH 44114-3108

EXAMINER

ORGAD, EDAN

ART UNIT	PAPER NUMBER
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2684

10

DATE MAILED: 12/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

TS

**Office Action Summary**

Application No.

09/528,126

Applicant(s)

SATO ET AL.

Examiner

Edan Orgad

Art Unit

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

DETAILED ACTION

*Response to Amendment*

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

New non-final rejection has been formed herein.

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (EP 0 833 466 A2) in view of Petratos et al. (US 4,680,676).

Regarding claim 1, Sato teaches a radio terminal device (fig. 1) having:  
a printed board having a front surface and a rear surface (fig. 1, element 10);  
a resin housing covering the rear front surface of the printed board (col. 4, lines 40-41);  
a metal housing covering the front surface of the printed board (col. 4, lines 46-48);  
wherein a part of the printed board is accommodated in the resin housing (fig. 1, printed board 10, within elements 15 & 16); and wherein a remaining part of the printed board is accommodated in the metal housing (col. 5, lines 10-14 & lines 32-43). However, Sato fails to specifically disclose an antenna disposed on a side of the rear surface of the printed board. However, in the same field of endeavor, Petratos teaches an antenna disposed on a side of the

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rear surface of the printed board (fig. 2, items 284,136, 288; col. 5, lines 16-40). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include Petratos antenna means with Sato's existing radio receiver in order to increase RF reception.

Regarding claims 2 and 6, Sato fails to specifically disclose the resin housing and the metal housing are joined with each other by a curved line from a view point of the side of the radio terminal device. However, Petratos teaches the resin housing and the metal housing are joined with each other by a curved line (i.e., depicted in figure 1, items 106c and end corner of item 140 near item 142c, at least formed a curved line) from a view point of the side of the radio terminal device (i.e., when items 102, 124, and 140 are formed together). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use Petratos teachings of the resin housing and the metal housing are joined with each other by a curved line from a view point of the side of the radio terminal device in order to provide better curvature to the phone for the user to use.

Regarding claims 3 and 7, Sato teaches the printed board and the metal housing are connect with each other electrically (fig. 1; col. 5, lines 10-14 & lines 38-46).

Regarding claims 4 and 8, Sato fails to specifically disclose the antenna is disposed near an end portion in the remaining part of the printed board. However, Petratos does disclose the antenna is disposed near an end portion in the remaining part of the printed board (fig. 1, item 136, fig.2 item 136, 184, 288; col. 5, lines 16-40). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include Petratos antenna means with Sato's existing radio receiver in order to increase RF reception.

Regarding claim 5, Sato teaches a radio terminal device: a printed board (element 10); a housing for accommodating said printed board (fig. 1), said housing including a metal housing so disposed as to cover a front surface of the printed board and a resin housing so disposed as to cover a rear surface of the print board (col. 4, lines 40-48 & col. 5, lines 10-14 & lines 32-43). However, Sato fails to specifically disclose an antenna disposed on the rear surface side of said printed board wherein in a vicinity of said antenna, at least a part of the rear surface side of said printed board is accommodated in the resin housing. However, in the same field of endeavor, Petratos teaches an antenna disposed on the rear surface side of said printed board wherein in a vicinity of said antenna, at least a part of the rear surface side of said printed board is accommodated in the resin housing (fig. 1, items 134, 136; col. 2, lines 62-64 & col. 5, lines 34-40). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include Petratos antenna means with Sato's existing radio receiver in order to increase RF reception.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edan Orgad whose telephone number is 703-305-4223. The examiner can normally be reached on 8:00AM to 5:30PM with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 703-308-7745. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

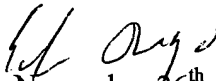
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

Edan Orgad

  
November 26<sup>th</sup>, 2003

  
**NAY MAUNG**  
**SUPERVISORY PATENT EXAMINER**